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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,626	05/08/2006	Hideki Kotaki	0124/003001	1398

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SMITH PATENT OFFICE  
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SUITE 901  
WASHINGTON, DC 20006

EXAMINER
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GREEN, ANTHONY J

ART UNIT	PAPER NUMBER
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1793

MAIL DATE	DELIVERY MODE
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08/22/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/578,626	<b>Applicant(s)</b> KOTAKI ET AL.	
	<b>Examiner</b> Anthony J. Green	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☒ Claim(s) 4-6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>05/08/06</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 12-14 and 20-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Specification No. JP 2002339082.

The reference teaches, in the abstract, and the machine translation, an aqueous solution of chromium nitrate which contains  $\leq 6\%$  total nitric ions and a total amount of organic carbon in an amount of 0.3 to 3%. The example shows how the solution is manufactured. Example 7 of Table 2 shows that no free nitrate ions are present in that example.

The instant claims are met by the reference.

3. Claims 1-3, 7-8, 15, 17 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Specification No. JP01-176227.

The reference teaches, in the abstract, an aqueous solution of high purity chromium chloride having an impurity metal ion content  $\text{Na} \leq 30 \text{ ppm}$  and  $\text{Fe} \leq 20 \text{ ppm}$ . The reducing agent is a 1-3 C alcohol. In an example, the solution is made by mixing chromic acid solution with an ethanol/water mixture and then a mixture of HCl and ethanol was added to complete the reaction.

The instant claims are met by the reference.

4. Claims 1-3, 7-8, 15, 17 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Specification No. JP01-176228.

The reference teaches, in the abstract, an aqueous solution of high purity chromium chloride having an impurity metal ion content  $\text{Na} \leq 15 \text{ ppm}$  and  $\text{Fe} \leq 5 \text{ ppm}$ . The reducing agent is ethanol. In an example, the solution is made by mixing chromic acid solution with an ethanol/water mixture and then a mixture of HCl and ethanol was added to complete the reaction.

The instant claims are met by the reference.

5. Claim 23 is rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Specification No. JP60-180919.

The reference teaches the production of a chromium chloride of high purity.

The instant claim is met by the reference.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1793

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Specification No. JP01-176227.

The reference was discussed previously.

The instant claim is obvious over the reference. While the reference does not specifically teach an example wherein the alcohols of claim 16 are utilized, it does suggest that a 1-3 C alcohol may be utilized and therefore the use of methanol is obvious.

8. Claims 9-11 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Specification No. JP 2000-178759 A.

The reference teaches, in the abstract, an aqueous system surface treating composition produced by dissolving 100 g of chromic acid and 52 g of phosphoric acid in 500 ml of water, adding methanol such that the weight ratio of (hexavalent Cr ion)/(trivalent Cr ion) is 1/1 and then adding water up to 1 kg, of which 500 g was added with 15 g of urea, and water added up to 800 g, placed in an autoclave treated at 150°C for 2 hours.

The instant claims are obvious over the reference. While the reference does not teach that a chromium phosphate having the instant formula is formed, since the reference teaches a method similar to that of claim 18 (mixing phosphoric acid, methanol and chromic acid) it is believed that the resulting formula would obviously be that of claim 9 absent evidence to the contrary.

***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 the phrase "the oxalic acid content" lacks proper antecedent basis.

In claim 2 the phrase "the total organic carbon content" lacks proper antecedent basis.

In claim 5 the phrases "the specific gravity" and "the molar ratio" lack proper antecedent basis.

In claim 6 the phrase "the concentration" lacks proper antecedent basis.

In claim 7 the phrase "the concentrations of impurity metal ions" lacks proper antecedent basis.

In claim 10 the phrase "the concentrations" lacks proper antecedent basis.

In claim 11 the phrase "the contents of impurity anions" lacks proper antecedent basis.

In claim 13 the phrase "the concentrations of impurity metal ions" lacks proper antecedent basis.

In claim 15 the phrases "the first stage of reaction" and "the reaction solution" lack proper antecedent basis.

In claim 23 the phrase "the oxalic acid content" lacks proper antecedent basis.

***Allowable Subject Matter***

11. Claims 4-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and provided that all 112 rejections are overcome.

***Information Disclosure Statement***

12. The remaining references have been reviewed by the examiner and are considered to be cumulative to or less material than the prior art references relied upon in the above rejections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony J. Green whose telephone number is 571-272-1367. The examiner can normally be reached on Monday-Thursday 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1793

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Anthony J. Green/

Primary Examiner  
Art Unit 1793

ajg  
August 20, 2008